

REMARKS

In response to the Office Action dated August 19, 2004, claims 1-20 are pending in this application. Claims 21-25 stand withdrawn.

§103 Rejection of the Claims

Claims 1-20 were rejected under 35 USC § 103(a) as being unpatentable over Chekanov (U.S. Patent No. 6,201,991) and in view of Hauck (U.S. Patent No. 6,560,489). Applicant respectfully traverses the rejection.

The Office Action fails to establish proper *prima facie* obviousness because the proposed combination of documents does not teach or suggest the desirability of that combination. The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *M.P.E.P.* § 2143.01. Applicant submits that motivation is lacking to combine Chekanov with Hauck for several reasons.

Hauck refers to regulating the output of the current generator to maintain the field strength below the heart's depolarization threshold (col. 4 lines 23-25), while Chekanov teaches away from non-muscle-stimulating electrical energy by reference to using its device to stimulate muscle contraction (*see* Chekanov col.2 lines 61-62, col.3 lines 42 - 49). Additionally, Hauck refers to a device to remodel heart tissue (col. 4 lines 16-18) through electric current stimulation to promote angiogenesis (promotion of new blood vessels) and to increase collagen type I production (col. 3 lines 42-45, col. 6 lines 57-62). Hauck also refers to angiogenesis as an alternative to unblocking clogged blood vessels (col. 2 lines 30-39, 52-56), while Chakanov refers to a device to prevent or decrease size of the plaque in blood vessels (Abstract). Further, Hauck apparently relates specifically to heart tissue (Figs. 3 and 4, col. 5 lines 28-30, claims 1 and 9), while Chekanov refers to positioning a device to treat blood vessels in the proximity of muscle tissue or connective tissue of the muscles (col. 2 lines 17-20, lines 35-44).

At least for the reasons that Hauck refers to non-depolarizing tissue remodeling while Chekanov teaches away from non-stimulating electric energy, that the device in Hauck treats heart tissue while the device in Chekanov treats blood vessels in the proximity of muscle tissue, and that Chekanov refers to a device to prevent or decrease plaque formation in blood vessels

while Hauck teaches away from unblocking clogged blood vessels, Applicant submits that motivation is lacking within the documents to combine Hauck and Chekanov.

Furthermore, the proposed modification can not render references unsatisfactory for their intended purpose. *MPEP* § 2143.01. Hauck refers to preventing the level of current from inducing unwanted heart depolarizations (Abstract). Because Chekanov refers to using its device to stimulate muscle contractions (col. 1 lines 46-51), the proposed combination of Chekanov with Hauck would render the device in Hauck unsatisfactory for this purpose.

In addition, to establish proper *prima facie* obviousness, the references must teach or suggest all claim elements. Applicant is unable to find disclosure of all claim elements of all contested claims in the proposed combination of Chekanov and Hauck.

Regarding claim 2, 12:

Applicant is unable to find in the applied documents, wherein the lead includes an electrode patch, and providing the lead includes positioning the electrode patch epicardially, as recited, among other things, in claims 2 and 12. The Office Action admits that Chekanov does not disclose an electrode patch (Office Action page 3), and Hauck apparently only refers to a sensor on an epicardial lead (col. 6 lines 1-4).

Regarding claim 6, 17:

Applicant is unable to find in the applied documents, generating the electric field includes periodically producing the electric field and spacing the electrical fields about (or less than) 10 seconds apart, among other things, in claims 6 and 17. The Office Action admits that Chekanov does not disclose providing electric field spacing about 10 seconds apart (Office Action page 3). Additionally, Hauck refers to frequencies of sinusoidal alternating currents of 2Hz to 200Hz and tens of kilohertz (col. 6, lines 51-61) and further describes pulse waveforms in relation to efficacy of the higher frequency components. Therefore, Applicant respectfully submits that Hauck teaches away from periodically producing the electric field and spacing the electrical fields about (or less than) 10 seconds apart.

Regarding claim 8, 14, 15:

Applicant is unable to find connecting the implant to at least two leads each having one electrode, and spacing the two electrodes apart from each other such that the electrical field generated between the two electrodes reduces plaque build-up in the coronary artery, as recited,

among other things, in claims 8, 14, and 15. The Office Action admits that Chekanov does not teach or suggest using electrodes on leads in coronary vessels (see Office Action page 3), and Hauck apparently does not refer to such an arrangement (col. 6 lines 12-33, Figs.3 and 4).

Further, Applicant is unable to find, wherein one of the two leads is adaptable to be positioned in an anterior vein and a second of the two leads is adaptable to be positioned in a lateral vein, and the electrical field is a non-heart-excitatory signal passing through a left marginal artery and an anterior interventricular artery, as recited, among other things, in claim 15.

Therefore, because motivation is lacking to combine Chekanov with Hauck and because such a combination would not disclose all elements of all the contested claims, Applicant respectfully requests reconsideration and allowance of claims 1-20.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

QINGSHENG ZHU ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

P.O. Box 2938


Minneapolis, MN 55402

(612) 349-9587

Date

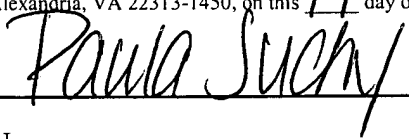
19 Nov '04

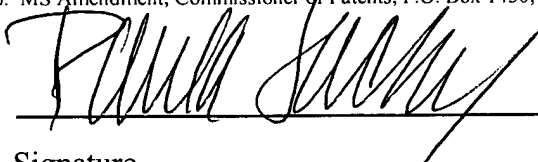
By


Timothy B Clise

Reg. No. 40,957

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 19 day of November, 2004.


Name


Signature